

Technology Integration Workshop 2016

Unit Title: *Creative Coding with Pokemon*

Grade Level: *(example: 9, 10, 11, 12 or 7-8) 9-12*

Subject Area: *(example: Science, Physics; English, Short Stories) Business Education, Introduction to Computer Applications*

Duration/Length/Number of class periods: *(example: 5 class periods) 1-2 class period(s)*

Description: *Students will explore the field of coding in the classroom using vidcode and Pokemon AR Game Maker*

Established Goals (National, State, Local): *National, Computer Science Teachers Association, CT.L3A-02*

Describe a software development process used to solve software problems (e.g., design, coding, testing, verification).

Common Core Math Standards, 5.OA.1, - Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

5.OA.2, - Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$.

Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.

English Language Arts standards could support this:

9. Speaking, Viewing, Listening and Media Literacy 7. Critically analyze information found in electronic, print, and mass media and use a variety of these sources.

9. Speaking, Viewing, Listening and Media Literacy 8. Communicate using traditional or digital multimedia formats and digital writing and publishing for a specific purpose.

What Enduring Understandings are desired? *Coding is a career field that is in high demand and low supply. Through offering a glimpse of coding it will increase knowledge of the career field. Coding will help set students apart from each other and increase literacy for all. Computer software can be used to control a variety of devices to complete specific tasks. Coding skills developed in one program transfer to others. Computer programming is at the foundation for virtually all aspects of our lives.*

What Essential Questions will be considered? *How does learning coding prepare you for life after high school? How can computer programs make problem solving easier and more efficient? How can a programmer use coding to solve real-world problems?*

Students will know / be able to: Simple coding terms and block coding, career fields in coding, websites and resources for coding, write a simple code for Pokemon and Ozobots

Description	Formative	Summative	Introductory Activity <i>Units must include at least one of each formative, summative, introductory activity and learning activity. Check the appropriate box; one per row.</i>	Learning Activity	Student Technology Used	Teacher Technology Used	ISTE Standards
Survey class: How many of you have written a line of code? ~Specifically with code.org? How many of you have coded a robot? ~Specifically with ozobots or spheros	X				X	X	3d
What is coding and what in our lives use coding? ~1. a set of symbols that can be interpreted by a computer or piece of software: binary code; Java code; ASCII code.the symbolic. 2. arrangement of statements or instructions in a computer program, or the set of instructions in such a program: That program took 3000 lines of code. ~Cars, Lights, Appliances, Computers			X	X	X	X	3c
How do you think you play Pokemon Go? ~Code through using outside resources like google maps and How do you think you tell these robots to move? ~Coding through drawing a line with a set of instructions using different colored pens.			X	X	X	X	4a-d
Students will write code to make a Pokemon app through 17 lessons using the website vidcode and the app Pokemon AR Game Maker https://app.vidcode.io/project/poke-go Students will watch a video and answer questions. https://edpuzzle.com/assignments/57a3516414cd267a3f4086e2/watch				X	X	X	1a-d 4a-d
App Evaluation - Students and staff will evaluate their app creation using the coding rubric.		X			X	X	6a-d
Extended Learning - Students will use coding to program an ozobot to race another student and analyze why won and why				X	X	X	4a-d 6a-d

Materials, tools and resources

www.dictionary.com

<https://app.vidcode.io/>

<https://app.vidcode.io/project/poke-go>

<https://edpuzzle.com/assignments/57a3516414cd267a3f4086e2/watch>

Ozobot starter kit

Unit Plan Author (name, school and optional email address or hyperlink to teacher's web page)

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